REMARKS

By the present amendment, claims 2, 4-7, 9, 10 and 13-16 have been amended. Claims 1, 8, 12 and 17-20 have been canceled. Claims 21 and 22 have been added.

Claims 2-7, 9-11, 13-16, 21 and 22 are currently pending in the application. Reconsideration and allowance of all of the claims is respectfully requested in view of the following remarks.

In regard to Rejection of Claims 1-6, 8, 10-14 and 16-20 Under 35 USC § 103(a)

The Examiner has rejected claims 1-6, 8, 10-14 and 16-20 under 35 U.S.C. § 103(a), as being unpatentable over Reck, U.S. Patent No. 6,689,327, in view of Presz, U.S. Patent No. 5,110,560. The Applicants believe that this rejection has been addressed and overcome by the present amendment.

By the present amendment, claims 12 and 17-20 have been canceled, and as such the Examiner's rejection is moot with respect thereto.

By the present amendment, claims 1 and 8 have been canceled in favor of claims 21 and 22, respectively, which are believed to overcome the Examiner's rejection. Claims 2-6 now depend from new claim 21, and claims 10-14 now depend from new claim 22. The Examiner's rejection will be addressed in view of claims 21 and 22.

Claims 21 and 22 recite:

> a catalytic material disposed on the sleeve to form an active surface for reacting with the exhaust gas

Bearing this in mind, the Examiner's attention is directed to the following feature of claims 21 and 22:

> a cross-sectional area defined by the active surface in a plane perpendicular to the longitudinal axis, the cross-sectional area decreasing with increasing distance from the inlet area

The Applicants submit that at least the above feature of claims 21 and 22 is not taught by Reck.

Referring to lines 44-61 of column 5 of Reck,

> FIG. 7 shows a further advantageous feature of a precatalyst 8 with a downstream main catalytic converter 9. Because of its conical shape, the precatalyst 8 effects an evening out of the flow.
> [...]
> The conical precatalyst 8 favorably has a spread angle of about 7° relative to an imaginary central flow line. Experiments have shown that the flow profile with conical widening also develops a favorable mass transport of the exhaust gas in the peripheral regions of the cone.

Referring also to Figure 7 of Reck, it is apparent that the cross-sectional area of the precatalyst 8 of Reck increases in the direction of the downstream main catalytic converter 9 of Reck. This increase in cross-sectional area is required by Reck to ensure favorable mass transport of the exhaust gas through the precatalyst 8. Therefore, Reck does not teach the cross-sectional area of an active surface decreasing with increasing distance from the inlet area.

This deficiency in Reck is not remedied by Presz, without admitting that Reck can be combined with Presz, and reserving the right to argue thereagainst in the future.

Referring to lines 67-9 of columns 11-12 of Presz,

> FIGS. 20-22 show a catalytic converter system, such as for an automobile, which utilizes the present invention. The converter system is generally represented by the reference numeral 800. The converter system 800 comprises a cylindrical gas delivery conduit 802, an elliptical gas receiving conduit 804, and a diffuser 806 providing a transition duct or conduit between them. The diffuser 806 extends from the circular outlet 808 of the delivery conduit to the elliptical inlet 810 of the receiving conduit. The receiving conduit holds the catalyst bed.

It is apparent that Presz teaches a diffuser 806 upstream from a receiving conduit. The catalyst of Presz is located in the receiving conduit downstream of the diffuser 806, and not on the diffuser itself. As such, the diffuser 806 of Presz does not have an active surface, and Presz does not teach an active surface having the same configuration as the diffuser 806.

Referring now to lines 9-15 of column 12 of Presz,

> The catalyst bed is a honeycomb monolith with the honeycomb cells being parallel to the downstream direction. The inlet face of the monolith is at the inlet 810; however, it could be moved further downstream to allow additional diffusion distance between the trough outlets and the catalyst.

It is apparent that Presz teaches a catalyst bed in the form of a honeycomb monolith. The inlet face of the catalyst monolith of Presz is at the inlet 810, which is downstream of the diffuser 806. Presz teaches that the catalyst may alternatively be moved further downstream of the diffuser 806, and that this modification would allow additional diffusion distance between the outlet of the diffuser 806 and the catalyst. As such, Presz suggests situating the catalyst farther downstream of the diffuser 806, and not on the surface of the diffuser 806 itself.

Therefore, Presz does not teach any specific cross-sectional area of an active surface, and in particular Presz does not teach the cross-sectional area of an active surface decreasing with increasing distance from the inlet area.

Therefore, at least one feature of claims 21 and 22 is not taught by Reck or Presz, alone or in combination, which combination is not admitted. As such, the Examiner is requested to withdraw his rejection of claims 2-6 depending from claim 21 and claims 10-14 depending from claim 22.

In regard to Rejection of Claims 7 and 15 Under 35 USC § 103(a)

The Examiner has rejected claims 7 and 15 under 35 U.S.C. § 103(a), as being unpatentable over Reck in view of Presz, and further in view of Gieshoff, U.S. Patent No. 5,934,073. The Applicants believe that this rejection has been addressed and overcome by the present amendment.

Claims 7 and 15 are believed to be allowable in view of their dependency from claims 21 and 22 respectively, for the reasons discussed above with respect to claims 1-6, 8, 10-14 and 16-20. As such, the Examiner is requested to withdraw his rejection of claims 7 and 15.

In regard to Rejection of Claim 9 Under 35 USC § 103(a)

The Examiner has rejected claim 9 under 35 U.S.C. § 103(a), as being unpatentable over Reck in view of Presz, and further in view of Hosoda, Japanese Patent No. JP 05-86843.

The Applicants believe that this rejection has been addressed and overcome by the present amendment.

Claim 9 is believed to be allowable in view of its dependency from claim 22, for the reasons discussed above with respect to claims 1-6, 8, 10-14 and 16-20. As such, the Examiner is requested to withdraw his rejection of claim 9.

Miscellaneous Amendments

By the present amendment, claims 2 and 4-7 have been amended to correct their dependencies in view of the cancellation of claim 1 and the addition of claim 21.

By the present amendment, claims 9, 10 and 13-16 have been amended to correct their dependencies in view of the cancellation of claim 8 and the addition of claim 22.

By the present amendment, claims 7, 9 and 15 have been amended for grammatical reasons and not for reasons relating to patentability. No change in claim scope is intended.

By the present amendment, claims 5-7 have been amended to be consistent with the wording of new claim 21.

By the present amendment, claims 14-16 have been amended to be consistent with the wording of new claim 22.

By the present amendment, claims 8 and 12 were canceled in view of the cancellation of claims 1 and 8, respectively.

Support for Amendments

By the present amendment, claims 21 and 22 have been added. Claims 21 and 22 are believed to be supported by the specification originally filed, in particular by paragraph [0033] of the published application:

> The at least one depression 19 is oriented essentially along the axis 14. This arrangement of depressions ensures that as the specific surface grows larger, the internal cross section area of the pre-converter, which is to say the surface that is defined by the perforated outer casing of the pre-converter, grows smaller.

In view of the above remarks, the Applicants respectfully submit that all of the currently pending claims are allowable and that the entire application is in condition for allowance.

Should the Examiner believe that anything further is desirable to place the application in a better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

At the time of filing of the present response, the Office was authorized to charge the fees believed to be necessary to a credit card. In case of any under- or over-payment or should any additional fee be otherwise necessary, the Office is hereby authorized to credit or debit (as the case may be) Deposit Account number 502977.

Respectfully submitted,

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